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SPOTS and STRIPES

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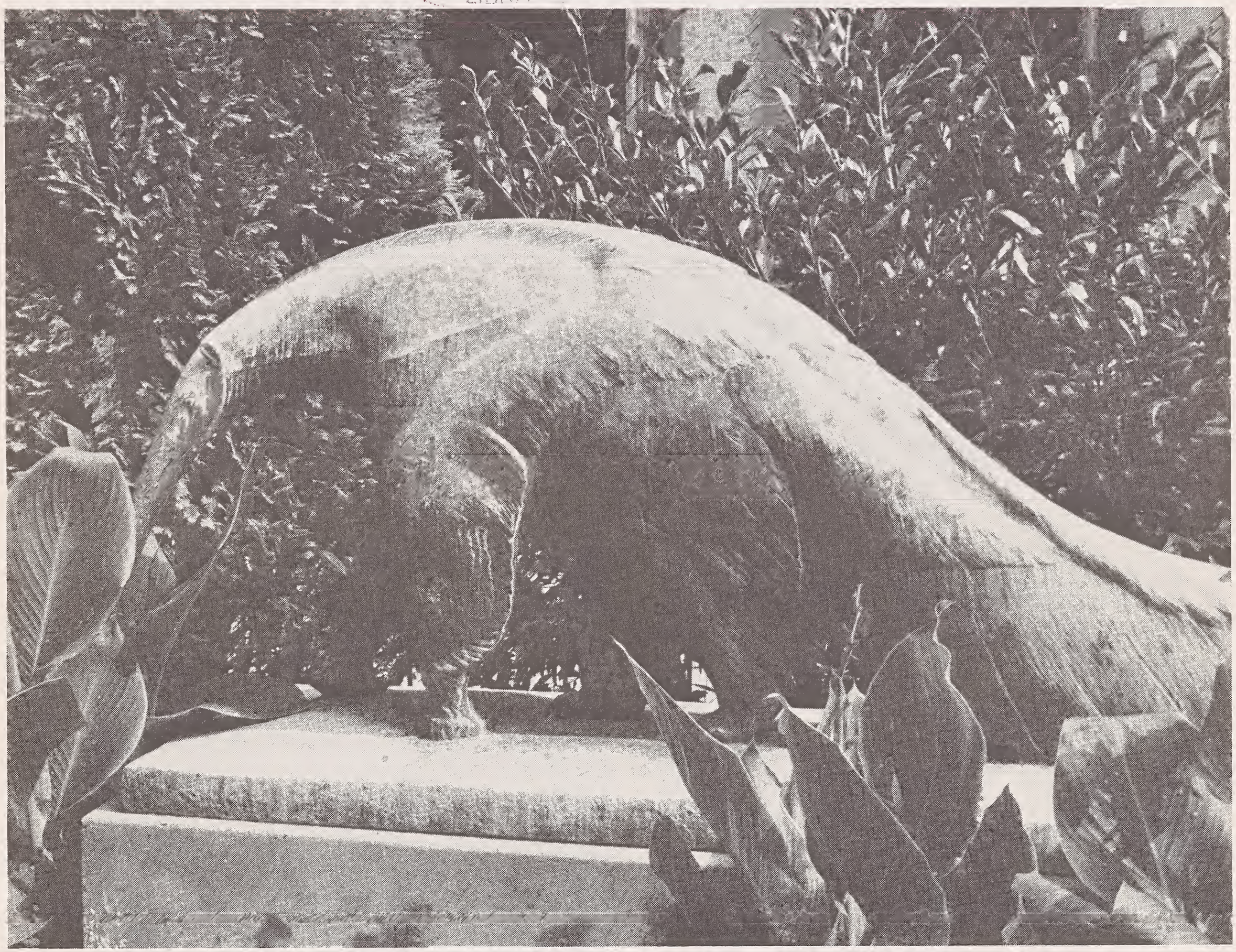

"Giant Anteater" by Erwin Springweiler, in front of the Small Mammal House. (See page 10.)

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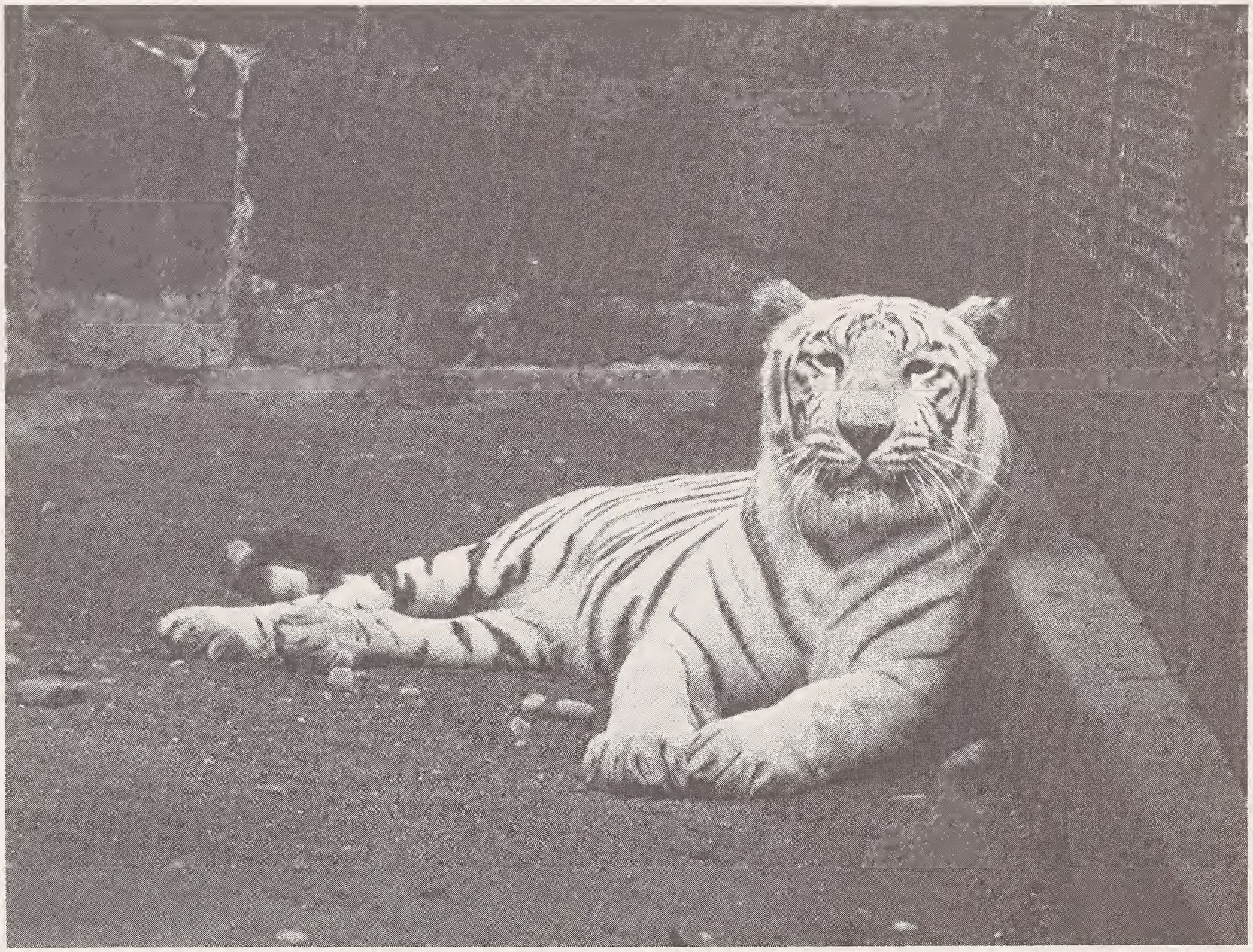

Mohini strikes a stately pose.

ELEVEN YEARS OF WHITE TIGERS

Mohini Rewa, the white Bengal Tiger, one of the most famous members of the National Zoo's collection, will celebrate her thirteenth birthday on October 30th, and December 5 will mark the eleventh anniversary of her presentation to President Dwight D. Eisenhower for the children of the United States. Her eleven years at the Zoo have been eventful ones; she has given birth to four litters and a total of twelve cubs, three of which survive at the Zoo and have approached or surpassed their mother in size. Mohini, whose full name means "Enchantress of Rewa," was born in Rewa in Central India, where nine white tigers have been sighted in the wild since 1900. Her sire, Mohan, was captured there as a cub of about nine months when his white mother and three white siblings were killed and was raised in captivity by the Maharajah of Rewa, Govindgarh.

Eventually, Mohan was bred to a wild yellow female, Begum, but the ten cubs they were to produce were all yellow. Every tiger, it was realized, carries two color genes, receiving one from each of its parents. A white tiger has two white genes; when, like Mohan, it is mated with a tiger with two yellow genes, all of the offspring will be yellow, though all will receive from the white parent one white gene. That's what geneticists mean by calling whiteness in tigers a recessive trait; two white genes are necessary to make a cub white, but one yellow gene is enough to ensure that it will be yellow. If, however, any yellow tiger with one white gene is paired either with a white tiger or with another yellow tiger that carries the white recessive trait, it will produce white offspring whenever a cub happens to receive the white gene from both parents. Thus Mohan was mated with one of his own daughters, Radha. This union produced Mohini, who has since given birth to five

white tigers, one of which the female Rewati, is still living and is the only white tiger in America besides her mother.

As the Bristol Zoo has notably done in England, in America the National Zoological Park has taken an active part in the attempt to preserve the white genetic factor passed on by Mohan to his many descendants. First, Mohini was mated to Samson, a son of Mohan's by Begum, and therefore not only her own uncle but her half-brother. Two litters resulted, including the white male Rajkumar, who survived for eighteen months, and the two surviving yellow tigers, Ramana and Kesari.

If Mohini was close kin to her first mate, she was still more so to her second. After Samson's death she was mated to her own son, Ramana. Two litters have been born to date and three white cubs, among them Rewati and the late, lamented Moni. The inbreeding thought necessary to preserve the white strain of tigers has become so intense that some have been led to compare their geneology to those of the Pharoahs. Indeed the danger of unfavorable side-effects has been increasingly in evidence. Rewati is cross-eyed and had problems with motor coordination when she first began to walk, and her short-lived litter-mate was found in an autopsy to have been brain-damaged. Moni also had motor problems and an odd tilt to his head. His death, too, though still not entirely explained, may have involved some genetic defect (*Spots and Stripes*, Summer 1971). In the morning of a hot, sultry day, a routine blood sampling was taken from Moni's tail, and several hours later he began breathing heavily. The veterinarian was called for, but before he could arrive, Moni was dead, apparently of shock. But the cause of the shock remains undetermined, and it is thought that Moni may have been genetically so high-strung that some series of minor discomforts, such as the heat and the blood test and perhaps other unknown factors, combined to produce the extreme reaction of shock.

Rewati, still playful but nearing her mother in size.

The births of both Rewati and Moni were surrounded by somewhat traumatic circumstances, and both soon had to be removed from their mother. Luckily for them, Dr. Theodore H. Reed, Director of the Zoo, and his wife, Elizabeth, were there to take over the painstaking task of hand-rearing them through the first difficult months. Rewati was born unexpectedly in April 1969; Zoo officials did not even know Mohini was pregnant.

Moni.

It was known that she and Ramana had mated at a time which would have yielded a birth in February, and at that time the Friends of the National Zoo had set up their 'round-the-clock "preg-watch" but had waited in vain. What no one realized was that Mohini had become pregnant during a second mating period that was thought to have been unproductive. Then, after giving birth to Rewati, Mohini still more unexpectedly delivered a second cub about seven hours later, a yellow male. Everyone was elated, but the male cub died a few days later, and then Mohini began to act peculiarly toward the remaining cub, licking it excessively and carrying it around the cage frequently.

Rewati was removed to the Reeds' home and thrived there (*Spots and Stripes* Summer 1969). She did have problems with walking, tending to

circle and hold her head in an awkward position, but overcame this difficulty eventually and at two months was frisking in the Reeds' back yard with a new playmate, a five week old female brought specially from the Cleveland Zoo. Except for her cross-eyes, Rewati has had no further problems. She has yet to give birth on her own, of course, although by now she is of age; and on that score she has a full life ahead of her.

Moni's brief childhood is remembered with even greater fondness and vividness by those at the Zoo, especially the members of FONZ. Three other cubs were born along with Moni, one of them also white, but as in Rewati's case another delayed birth caused difficulties. Forty-eight hours after Moni's litter was born, Mohini delivered an almost unprecedented fifth cub, which was stillborn; and, during the throes of labor, she inadvertently rolled over and crushed to death all the other cubs but Moni. Once again Mrs. Reed came to the rescue, and Moni progressed under her care from bottled formula to a mixture of baby food, meat, cereal, and formula. After three months, Moni was first displayed in his outdoor enclosure by the Lion House. As he continued to grow and became a more frequent occupant of the outdoor enclosure, he could be seen playing hide-and-seek with his keepers through the fence or batting an empty beer keg around with his already powerful forepaws.

Since Moni's death the need for less risky methods of providing white tigers for the future than close inbreeding has become more apparent. Dr. Reed has been considering as mates for Mohini—and Rewati—tigers less closely related than Ramana. Among these the current favorite is Ram, a yellow tiger located at a small zoo in South India, one fourth of whose genes are from Mohan's line and the rest from wild yellow tigers. Whether he carries the white genetic factor is as yet unknown, but if he does he would be the perfect choice to sire a new line.

Mohini's whiteness is not albinism as many people suppose—after all, her eyes are blue—but simply a mutation in coat coloration the survival value of which is little understood. White tigers seem to grow faster and to a larger size than other tigers, and it has been suggested that whiteness may be genetically tied to this increased size, which may in fact have proved of some value in this century as the population of wild tigers has been steadily decimated by hunters and their jungle territory depleted and divided. But it is more likely that the white tiger is simply a mutant that occurs but seldom in the wild and can only be selected for strongly under the artificial conditions of breeding in captivity. Now that the Bengal Tiger as a species is in great danger of extinction due to the thoughtless predation of man, it may be, paradoxically, that this mutant can increase because of its deep, almost instinctive appeal to the human sense of wonder and admiration.

BREEDING PROGRAM AT THE REPTILE HOUSE

This year the Division of Reptiles and Amphibians had a higher rate of animal births than ever before. That's good, right? We always want baby animals. We want to have animals breeding in zoos; if nothing else, it shows we keep them well. In addition, a high rate of reproduction should be a sign that we are involved in conservation, especially if the animals we help propagate are rare and endangered. Well, we are happy with a higher birth rate, but not exactly for the above reasons. The philosophy surrounding propagations programs is a bit more complicated.

Of course baby animals are valuable to many just because they are babies—they are cute, they bring back memories of our own childhood, and we can easily project our feelings of helplessness onto them. This is all perfectly normal. (You don't encounter it as much with reptiles and amphibians, though there some to whom baby turtles are adorable.) These feelings are most commonly found among people who think zoos are primarily for children. They are for children, of course, but so is a National Park. And, like the National Parks,

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zoos are not built with children as their exclusive audience. Anyhow, I wouldn't want to think we produced baby animals just because people like baby things. After all, it is a fact of life that most of them grow up to be adults, and what to do with them then is another matter.

No, there has to be a better reason for propagating animals, especially the scaly and slimy ones. (By the way, certain animals in the Reptile House *are* slimy, but that isn't any reason to dislike them.) One suggestion might be given that above: it proves we're keeping our animals well if they reproduce themselves. I, personally, must take a stand here, since I'm never quite sure after a reproductive season ends that I know much more about animal needs and care than I did when it started. And when we have learned something, most of what we did right was noticed after the fact. It was science in retrospect—and I wouldn't want to justify my breeding program on grounds like that. As for conservation, you have to get animals into the zoo in the first place before you can breed them, and that's not conservation in my book. I don't deny that some of the mammals, and maybe a bird or two, might be able to use the Zoo as a survival center; but from over here at the Division of Reptiles and Amphibians, I don't see many species being saved in zoos, even among mammals. Last year over 2 million reptiles were brought into this country, many of them for the "zoo trade." I have no facts, but I feel safe in saying that the majority of them are no longer living, and of the few that made it fewer still are parents of their species. Many animal species in fact have been endangered in great part by collecting. On the other hand, if you listen to the spokesmen of some zoos, you will hear that a zoo is a medium of education that teaches conservation, and that the propagation program plays only a limited role in conserving endangered species. This, I think, exemplifies a more realistic approach.

If all this is true, why am I happy that we had a lot of births this year? What good is propagation in the zoo anyway? Does this mean that we are never going to have baby animals to identify with, and will zoos go on consuming wildlife until habitat destruction, hide trade, and collectors make animals a memory? Regrettably, that could well be the case. If so, what should zoos be doing? Someday I'd like to write about how zoos should be oriented around topics and experiences and about how animals should be selected for exhibits and not exhibits created for the animals that a zoo already happens to have acquired—simply because they were unusual or even just because they were there to acquire. But I know it's hard to get people to read anything about how zoos should quit collecting for its own sake and should instead talk to the public about nature, beauty, and survival.

However, I am happy about our breeding program because we are breeding common everyday animals that fit into some kind of plan. We first of all accept the fact that we are in the business of exhibiting animals to the public to demonstrate biological processes and natural order. We have tried to select new animals that are suitable for this purpose, are local North American fauna, and are commonly found. We have tried to pair up all of the exotic animals we did have, hoping to produce a supply of young animals that other zoos could

draw on rather than continuing to raid wild populations. And anything we reproduce is studied. If it is local, we can find study areas where the demography of a population can be worked out and introductions of new-born animals accomplished. These populations studies can in turn become the province of the local herpetological club, many of which organizations are now breaking away from their collection-oriented roots and taking a serious position in the scientific community. A large number of local animals that we can produce can also be used in more critical studies of nutrition, pathology, and development, since we have adequate sample sizes and controls. This emphasis on North American fauna, exhibit themes, and science may make you wonder how a division of reptiles and amphibians can be of interest to the public. If so, I would ask you to read some of the writings of William Conway, the director of the Bronx Zoo in New York. I think he could open your eyes.

Finally, what animals have mated and produced young at the National Zoological Park, Division of Reptiles and Amphibians? Well, 20 baby Purple-spotted Vipers (*Trimeresurus purpureomaculatus*) were born this August to parents that had also given birth to living young in 1969. Some people were surprised to find that this species is not strictly an egg-layer. They seem to enjoy eating Leopard Frogs. We had a pair of South American Bullfrogs (*Leptodactylus pentadactylus*) produce a foam nest and lay over 150 eggs. From the eggs our breeding pair produced, one hundred and thirty-six frogs metamorphosed. Although the adults stay in the water, the young ones showed a marked preference for the drier, leaf-covered parts of the cage. Several of our turtles produced young, including our Wood Turtles, White-lipped Mud Turtle, and African Helmeted Turtle (*Pelomedusa subrufa*). We had egg production but as yet no young from our Crested Basilisk Lizards, Iguanas, and *Anolis garmani*. All of the young animals that have been born have been turned over to biological technicians and keepers working in the Division, who are keeping records of food quality and quantity and how this reflected in the growth rates of the young animals. All in all, of the species we paired, 25% reproduced themselves this year. Next year we hope to do even better.

This is a small beginning, but we are gratified because we feel that our division has a realistic and responsible plan that gives the most to the public and takes the least away—forever—from nature. Not only do we have such a plan, but we are beginning to make it work.

– Jaren Horsley,
Curator of Reptiles and Amphibians

SIAMANG GIBBON

Getting out of your car in the parking lot by the FONZ office or beneath the elephant house, or even as far away as Adams Mill Road, you may have heard a raucous, almost bird-like whooping that is louder on a quiet afternoon than any other sound in the lower Zoo. The high, rich tone is repeated at intervals of about two seconds, then speeded up, tailing off at the end much as does the familiar Cardinal's song. You may also have observed that in fact this is not a bird's call, though it sounds like one from a distance, but is made by the Zoo's active and vocal Siamang Gibbon in her cage in back of the Lion House. The Siamang Gibbon never fails to attract a crowd with her acrobatics and her remarkable vocal apparatus.

The black-furred primate, who as far as we can tell has never been named but is known affectionately to some of our FONZ guides as "Noisy Nelly," is one of a most unusual species of ape, notable for its large, fleshy throat sac. By filling this sac with air, the Siamang is able to sustain a nearly continuous droning bass sound, which it punctuates with the higher-pitched call that is so familiar throughout the Zoo neighborhood. The

lower sound does not carry for so great a distance; except to the experienced ear, its repetitive baying is usually unnoticed at a hundred feet from the Siamang's cage. The higher sound, on the other hand, is said to be audible for up to three miles in the wild. Nature, it seems, has endowed the Siamang with a remarkable ability human vocalists might well envy—to keep a treble and a bass accompaniment going almost simultaneously. The slightly smaller grayish Gibbon that occupies the cage next to the Siamang's is also known for its histrionic calling, but the Siamang surpasses it with her two registers.

In the presence of human spectators, especially when they are many and noisy, the Siamang often becomes excited and moves rapidly around her cage, keeping her face always toward the crowd when really annoyed and chattering constantly. This behavior appears as a mixture of wariness and bravado; actually she is probably defending her limited territory against this alien mass, that seems to threaten invasion but never actually advances.

In Sumatra and Malaysia where they come from, Siamang Gibbons live in troops of four to ten or more; in the early morning, it is reported, the whole troop stages a noisy "concert" in unison for up to twenty minutes. This must be quite a performance judging from what the Zoo's Siamang is able to accomplish all by herself. Occasionally the group vocalization will be repeated throughout the day, often apparently to warn off other groups of Siamangs. When an animated crowd of humans surrounds our Siamang's cage, to her they may be just another unfamiliar band of apes.

When a Siamang Gibbon walks on the ground, it is usually only for a short distance, its long arms raised over its head. Its feet are better adapted to picking up and carrying objects than to walking, and in its native forest environment it does most of its traveling with its hands, leaping for great distances from branch to branch. It is a true brachiator, holding the four long fingers of its hand together and using them as a hook to support its weight, rather than grasping the limb as a human—or a chimpanzee—would do. The female at the National Zoo displays the same ability to perfection, climbing along the ceiling bars of her cage or swinging from one of her perches to a perfect one-handed landing on the next.

Just this August our Siamang seems to have created quite a stir in Washington when a woman living near the Zoo, hearing what she thought was a call for help about 4:30 a.m., called the police. Three squadcars arrived and combed the area, finding nothing. "Lady," said one of the officers, who evidently wasn't much of a naturalist, "that's one of those birds over at the Zoo—either a parrot or a peacock." So the newspapers reported it, but we think we know who the real culprit was.

TWENTY-FIVE AND FIFTY YEARS AGO

AT THE ZOO

"The total number of individual animals and the different kinds of animals the Zoo has been able to maintain during the war has not declined as much as was anticipated, although the variety of rare, unusual, or especially interesting animals has been reduced, the reduction being offset in part by more of the commoner creatures. At the beginning of the war, when it appeared that Washington might be bombed, the Zoo disposed of its venomous snakes. Later, when the danger of bombing was over, several lots of the interesting pit viper known as Habu (*Trimeresurus flavoviridus*) were kept for the Army Medical Corps, which was using them in connection with some of their studies."

— *Smithsonian Annual Report*, 1946

"Mr. Isaac Ellison, of Singapore, presented to the park a fine young male orang-utan, about 3½ years old. No specimen of this ape had been on exhibition in Washington for many years, and the addition to the collection of an example so thrifty is gratifying. Mr. Ellison brought the orang-utan, together with a Javan macaque, with him from Singapore, while on a visit to America."

"Five birds and 2 reptiles, captured within the park, were added to the collection."

"Regardless of park regulations, the paper and trash nuisance reached such serious proportions during the early spring months that a special campaign to enforce the laws against throwing and leaving rubbish on the lawns was inaugurated. With few exceptions visitors have taken kindly to the requests of officers that all papers and other refuse be gathered up and deposited in the trash receptacles, and a very distinct improvement in the appearance of the grounds has resulted."

— *Smithsonian Annual Report*, 1921

MAKING FRIENDS WITH OUR ZOO RESIDENTS

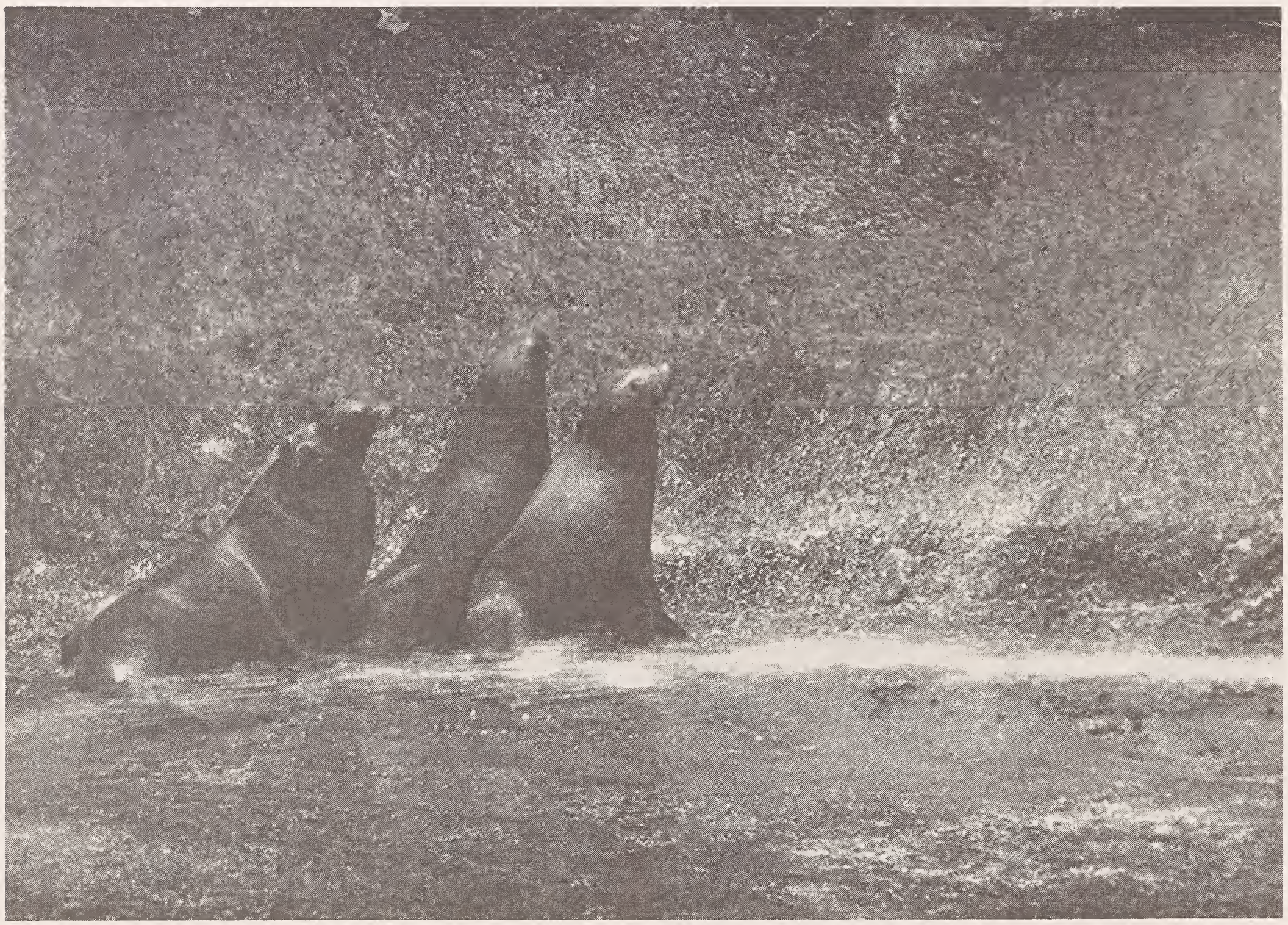
Meet the Zoo's four California Sea Lions. Sea Lions are related to Seals; both kinds of animals are called "Pinnipeds," which means "wing-footed." But, unlike true Seals, Sea Lions have external ears and can use their flippers to pick up objects. Sea Lions also use their flippers to scratch themselves and to drag themselves along on land, on the rocky or sandy beaches where they live in California or beside their pool at the Zoo.

The Zoo's Sea Lions are friendly and playful. All four of them will come out of the water and follow honking after their keeper when he walks by. At their feeding time, you can buy fish and feed the Sea Lions. If it knows food is coming, a Sea Lion at the Zoo will hold his head up waiting for it like a dog and barking excitedly. It will even jump up part of the way out of the water to catch the food with its mouth. Some Sea Lions can even jump all the way out of the water. California Sea Lions are intelligent and easy to train; they make up most of the trained "Seals" in circuses.

DID YOU KNOW?

Sea Lions are excellent divers and some have been able to stay under water for up to half an hour. When they reach the surface they breathe out forcibly the air they have kept in their lungs. If you have seen them at the Zoo you probably remember the snorting sound they make when they exhale. Then as it begins to submerge again, the Sea Lion holds its mouth open, breathing in, until the last second that its head is above water.

Sea Lions look black and hairless in the water, but when they have been dry for a while you can see their coat of short golden-brown fur. Some of their hairs, called "guard hairs" are longer and coarser and protect the fine, soft shorter hairs. Sea Lions have a layer of oily fat or blubber between their thick hides and their muscles. This layer keeps them warm in cold water and also helps them float. They can see very well in the dark underwater environment where they look for food in the wild.



The Sea Lions as their pool is being drained for cleaning.

HOW THE PARROT GOT ITS NAME

When we went on a trip to the Zoo, we had a special treat. We got to go into the Animal Hospital, where not many people can go. Inside we saw a parrot. Somebody had tried to take it from South America to the United States illegally. The Customs took the parrot and sent him to the Zoo. The parrot had to be quarantined for 45 days. A man there let some of us hold it. The parrot, as if it understood, jumped onto Leroy's head. Then, as if it thought his hat was something to eat, started pecking on his hat. Since the parrot landed on Leroy's head, they decided to call it Leroy.

By Susie Roehrig

TO OUR JUNIOR MEMBERS

Write about the animals! This is why we've started this new section for all of you under 16 who love the Zoo. Send in letters, ideas, poems, stories, riddles, puzzles, and anything else as long as it's original and about our National Zoo. We will publish as much as we have space for, but we'll be unable to return anything you have submitted, so please keep copies.

Remember that if this page is to be yours, then you'll have to start sending in materials now to

SPOTS AND STRIPES
FRIENDS OF THE NATIONAL ZOO
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WHO AM I?

I have a fringe of long white hairs
on the back of my black suit
that when I leap from perch to perch
acts like a parachute.

Colobus Monkey

I have two horns in a row;
I'm grayish-brown and large.
My eyesight isn't very good,
so when in doubt, I charge.

African "Black" Rhinoceros

THE ANIMALS CAME TWO BY TWO

Can you match these animals with their mates?

1) peacock	a. mare
2) lion	b. goose
3) gander	c. duck
4) bull	d. tigress
5) stallion	e. peahen
6) stag	f. lioness
7) ram	g. sow
8) drake	h. vixen
9) tiger	i. ewe
10) boar	j. cow
11) fox	k. hind

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1)e, 2)f, 3)b, 4)j, 5)a, 6)k, 7)i, 8)c, 9)d, 10)g, 11)h

Ceramic relief of Australian Moas at the Bird House; the artist "D.M." is unknown.

ART AT THE NATIONAL ZOO

There are those who visit the National Zoo because it is a pleasant place to picnic. Some come so their city-bound children can exhaust themselves scampering over the grassy slopes. Others simply find the Park a happy place to stroll with a friend. But primarily people come to the Zoo to see the animals. Few if any visitors are looking for art; but here, for all to enjoy, is an accumulation of sculpture, mosaics, and other forms of art designed to enhance one's trip to the Zoo. Certainly such Zoo buffs as the members of FONZ are aware of the animals captured in stone and bronze at NZP; but for those interested in discovering the why and wherefore of art at the Zoo, we've done a bit of research and come up with some fascinating information and a few intriguing mysteries.

Some of the oldest sculpture at NZP is overlooked (or more accurately, underlooked) by the average visitor, who is preoccupied by the antics of the living occupants of the building. High atop the Monkey House sit three bear cubs, four fox cubs, and two bobcats, representative of early art forms used to suggest the spirit of the Zoo in its architecture. The building, which was completed in 1907, was the second major structure built at NZP. As the collection had outgrown the original building, now known as the Lion House, a new addition to house small mammals became a necessity. The cement figures on the roof of the new facility were designed by Mrs. L. S. Kemeys, of whom we have been able to discover little except that her favorite medium was watercolor and her husband was a sculptor of considerable note.

Much of the art at the Zoo was acquired under the leadership of the late Director Dr. William Mann. When the building of a new Bird House was proposed, one of Dr. Mann's closest friends, the English artist, Stephen Haweis, agreed to design the main entrance to the building as a favor to his friends, Bill and Lucy Mann, at whose wedding he had served as best man. Mrs. Mann remembers that he declined financial remuneration with the quip

that his reward would be the fame he would derive from the design. However, after the building was dedicated in 1928, he rather ruefully commented that he could expect little fame from his contribution as his name was misspelled and printed upside down at the bottom of the right-hand column. This handsome mosaic archway depicting a variety of exotic birds and plants framed in colorful geometric designs was carefully preserved and moved inside the building during the renovation of the Bird House in 1964. It is now used as the lower north entrance to the indoor flight room.

Some of the finest art to be found in the Zoo was procured by Dr. Mann in the 1930's. In these frenzied times there are those who look upon the Great Depression as the "good old days," but many more objective memories recall that period as an era of despair and hunger, even among professionals and the well-educated. Francis V. O'Connor, in his book *Federal Support for the Visual Arts: The New Deal Then and Now*, states that "when Franklin D. Roosevelt became president on March 4, 1933, close to ten thousand artists in the United States were unemployed. . . . The blunt realities of the time demanded that an artist abandon his profession if he wanted to eat . . . or else accept the disgrace of the public dole." Dr. O'Connor reviews the steps taken by the Federal Government to alleviate unemployment, noting specifically those programs initiated to aid artists. From the Civil Works Administration (CWA) and the Works Progress Administration (WPA), grew the Public Works of Art Project (PWAP), the Federal Art Project (FAP), and the Treasury Relief Art Project (TRAP). According to Ralph Purcell in *Government and Art,* the government hoped to accomplish two objectives through these programs: to "make the arts of the theatre, writing, painting, and music part of the life of the millions of Americans who did not live in urban areas where these activities were more readily available" and to enable the artist "to follow his profession in the public programs that were developed to cope with the problems of unemployment in the 1930's."

Another program designed to employ the most capable artists to decorate public buildings was conducted by the Treasury Department in a Section of Painting and Sculpture, which was later known as the Section of Fine Arts. The artist Edward Bruce, chief of this section and previously a leading light in PWAP, was a friend of the Manns, and Mrs. Mann recalls that NZP was among the first federal agencies to apply for the services of artists employed by the government. The Zoo also employed more artists than any other local institution.

At one time there were those who questioned the quality of the art being sponsored by government programs, but according to an article in the *Washington Post* of February 2, 1934, the art work at the Zoo was granted "a clean bill of health" after being inspected by a committee of noted art critics, including G. Powell Winnegerode, director of the Corcoran Gallery, Duncan Phillips of the Phillips Memorial Art Gallery, Dr. Charles Moore, chairman of the Fine Arts Commission, and Charles Bittinger, president of the Arts Club of Washington.

Though frequent cleaning of the cages finally destroyed the painted backgrounds in the Reptile House (which included a Hindu temple for the Cobras, an Arizona desert for the Rattlesnakes, and a swamp for the Mangrove Snake), and Klir A. Beck's wood carvings of Polar Bears, Sea Lions, and monkeys (used in designating feeding times) as well as Frances Roberta Boswell's panel showing the distribution of cats throughout the world, have all long since disappeared, we may still enjoy other art works born of the Depression. The only remaining painted background is the fading mural on the wall of the hippopotamus cage in the Elephant House. This and a mural in the giraffe enclosure that no longer exists were the work of an

Italian artist Domenico Mortellito. It was he who carved the "Noah's Ark" of lacquered linoleum which formerly adorned the walls of the Zoo's restaurant.

Another artist who participated in the Federal art programs at the Zoo during this period was Charles Knight, who was also renowned as an author and lecturer. His work in restoring prehistoric animals at the Field Museum of Natural History is reflected in two books, *Before the Dawn of History* and *Life Through the Ages*, and in his lectures entitled "Prehistoric Man and Animals."

Appropriately, this interest is represented by his work here at the Zoo. Knight's reconstruction of a dinosaur can be found in the mosaic over the main entrance to the Reptile House, which was completed in 1931. The reliefs of mammoths, mastodons, and other prehistoric mammals over the doors of the Elephant House and the twelve aluminum plaques representing ancient animals around the interior walls of that building illustrate this artist's ability to portray his favorite subject in a variety of media. On the floor of the building, which was opened in 1937, he created five medallions which picture an Indian rhinoceros, a hippopotamus, a Brazilian tapir, and both African and Asian elephants. Other displays of Charles Knight's art in the Washington area can be found at the National Museum, the Biological Survey Building, and the Carnegie Institution.

Two of the most magnificent remnants of PWAP art are to be found on the floor near the entrances to the Lion House. These medallions representing a Lion's head and a tiger's head were designed by Klir Beck with George K. Payne, then a young man fresh out of art school, assisting in the assembly. Mr. Payne, who was for years in charge of displays at Woodward and Lothrop's, answered our letter of inquiry with a cassette tape full of reminiscences of the period. He recalls that "the heads were made by laying out the design in brass stripping, about 1½ inches thick, standing on edge to form the design. This was all welded into place, and Beck and I filled in the spaces in between the brass with chips of stone, mostly marble, mixed with a solution of cement." He remembers also that a special piece of stainless steel was cut in a triangular shape for the sparkle in the cats' eyes. In the *Post* article Payne's drawings and paintings of animals won the particular admiration of the critics.

Probably the Zoo's most noted reminder of the Thirties is the bronze form of a Giant Anteater in front of the Small Mammal House. The work of a German-born sculptor, Erwin Springweiler, the statue was unveiled in March of 1938. Springweiler's work is also exhibited in the Detroit Zoo and in Brookgreen Gardens in South Carolina.

Heinz Warneke, who was also born in Germany and studied art in Berlin, was the creator of the charming granite statue, "Playing Bears," located near the upper entrance to the bear line. Another of his statues, "The Prodigal Son," is in the Bishop's Garden at the National Cathedral. His work also appears at the Cathedral's War Memorial Chapel, the Department of Interior, and the Philadelphia Zoo.

One of the mysteries that remains unsolved is the identity of the "D.M." who designed the bas reliefs which are now located on the exterior back wall of the Bird House. The blue and white ceramics are thought to have been produced during the Depression, but the artist remains unknown. It is only a guess, of course, but we think he may have been none other than Domenico Mortellito. And who designed the marvelous doorway to the Reptile House that frames Charles Knight's mosaic dinosaur? Was it simply part of Municipal Architect Albert Harris's plan, or was it, like Stephen Haweis's archway, a separate work of art? The building, which was opened in 1931, was considered to be the ultimate in zoo architecture at the time, closely following the aquarium-type construction of the London Zoo's reptile house; but neither Dr. O'Connor of the National Collection of Fine Arts nor Karel Kosko of the General Services Administration, who is also delving into the history of "Depression art," could offer information concerning the art intrinsic to the

Reptile House. It would be nice to know who fashioned the turtle on the floor just inside the door and who designed the columns resting on turtles and topped by toads. Were they done by the same craftsman who formed the gargoyle-like reptile heads that embellish the outside walls of the building? Surely the great doors with their handsomely carved panels and brass snake handles are the work of a skillful artisan; and while the lower door of the building is not so splendid, the reliefs of amphibians and reptiles over it are noteworthy. Perhaps some reader whose memories of those days are alive and well can shed some light on these riddles.

In more recent years the Zoo has been the recipient of several delightful *objets d'art*. In 1952 some friends of the Zoo who chose to remain anonymous donated the statue of the bear cub that guards the short bear line. The cub, carved from volcanic rock, is the work of the well-known sculptress Cornelia Van Chapin of New York. Cornelia Chapin, known internationally for her work in stone and wood, is represented in museums and private collections here and abroad. In 1937 in Paris she won the *Grand Prix* for stone sculpture, awarded by a jury representing 43 nations at the International Exhibition of Art. Her "Byzantine Christ" stands on the high altar of the Cathedral of St. John the Divine in New York City. In Rittenhouse Square in Philadelphia one can see her giant frog carved out of granit and weighing 1,800 pounds.

Another bear cub, hewn from a 600 pound chunk of Italian porphyry, greets visitors arriving at the Connecticut Avenue entrance. This example of modern sculpture was given to NZP by the artist, Jacob Lipkin, in March of 1969. The sculptor, who is fond of giving away his work, is particularly proud of his statue of a little girl that stands in the lobby of Bellevue Hospital in New York City. Transportation for the marble bear from Mr. Lipkin's studio in New York was paid for by another anonymous friend of the Zoo.

Two gifts that possess nostalgic value are the granite eagle that dominates the northern end of the Bird House mall and the old clock near the FONZ gift shop. The former was originally one of twenty-two eagles that graced the old Pennsylvania Station in New York City. When that historic building was razed, this great stone bird was spared and donated to the Smithsonian. It was placed in its present site in June 1965. The old clock, a familiar landmark to Washingtonians, stood for thirty-four years at the corner of 13th and F Streets, N.W., marking the hours for passing shoppers. It was moved from there in 1952 and four years later was presented to the Zoo by a donor who wished to remain anonymous at the time. However, upon his death it was revealed that the seventeen-foot-tall clock had been given by its original owner, the late Elton Louis Howe, who had served as the Washington representative of a clock manufacturer.

It was Seneca who said nearly 2000 years ago, "All art is but imitation of nature." Visitors to the National Zoo are especially fortunate in that while they are observing some of nature's most magnificent creatures, they may also enjoy the creations of some of her finest imitators.

– Phyllis Yingling and Diane Terry

FONZ NEWS

FONZ Lecture: On October 3rd the Friends of the National Zoo presented Dr. Louis S.B. Leakey, world-renowned anthropologist and paleontologist, who discussed the most recent evidence of man's antiquity. Dr. Leakey's work uncovering evidence of man's predecessors at Olduvai Gorge in East Africa has radically altered conceptions of man's prehistory. Along with his wife, Mary, he has discovered evidence of a two-million-year-old predecessor to modern man, the tiny tool-using creature he named *Homo habilis*. Previous to their discoveries, most scientists believed that true ancestors of modern man did not exist more than one million years ago. The Leakeys have, in effect, added one million years to the history of mankind.

Dr. Leakey was born in Kenya and grew up among the Kikuyu tribesmen, where his parents were missionaries. At the age of thirteen, he was initiated into Kikuyu manhood, and he learned from the Kikuyu a love and respect for the African countryside and a curiosity about man's origins. At eighteen years of age, he travelled to England, where he studied anthropology and archaeology at Cambridge and later earned a Ph.D. at St. John's College.

In 1933, Leakey met Mary Nicol, a geology student at the University of London, and shortly thereafter they were married. For nearly 30 years the Leakeys explored the 35-mile-long Olduvai Gorge which borders Tanzania's Serengeti Plain. Encouraged by finds of ancient tools, the Leakeys proceeded with infinite patience and finally uncovered remains of *Homo habilis* and other ancestors of mankind.

Dr. Leakey appeared in cooperation with the Louis S. B. Leakey Foundation, which supports his research. Dr. Leakey's son, Richard, will speak in the third lecture of the FONZ series on February 19th, 1972, concerning anthropological discoveries at East Lake Rudolph in Africa. The upcoming lecture will be on December 4th, 1971, when

Baron Hugo Van Lawick and his wife Jane Goodall will present their film, "Wild Dogs, the Wolves of Africa."

Guided Tour Program: The FONZ guides had their first meeting of the Fall on Monday, September 13. Warren Iliff spoke and answered questions on the latest developments at the Zoo, and Richard Sheridan, the new Acting Executive Secretary of FONZ, introduced himself to the guides. Betty Howser has prepared a graph showing the growth in the guided tour program since 1969; the number of tours has increased from 169 in fiscal year 1969 to 278 in fiscal 1971, and the number of individual children receiving tours from 8,517 to 17,215. The number of guides for fiscal 1971 was 35; hopefully this number is about to increase, as many new prospects entered the new Fall Guide Training Program that began October 4th.

The first tour of the season was given on September 3rd, and it was an interesting one, consisting of children whose parents were attending the American Psychological Association's National Convention in Washington.

Guide Book: Work is getting under way at the FONZ office on one of Dr. Reed's pet projects for FONZ, a guide book to the Zoo. Format is being studied and discussed, and material for the text is being written.

Gift Shop: Many new items are in stock at the new Gift Shop, all of which would make ideal Christmas gifts. There are imported hand-carved animals, including rosewood elephants from India and camel caravans from Israel. There are Irish linen calendars and wildlife towels and handsomely mounted color photographs of owls, llamas, cats, and other animals.

Shirley McNair has retired as shop manager and is returning to her old role as a volunteer. Mrs. McNair guided the shop through the difficult period of its transition to the new building and had served a long time both as volunteer and as manager at the old shop. Ann Campbell is capably replacing her.

Requests for Help: The office and new shop are both in need of vacuum cleaners, and we also need an electric typewriter—a portable would do—and a refrigerator that works! If anyone has any of these items and would be willing to give them as a tax-deductible gift to FONZ, please let us know.

In addition, we still urgently need weekend assistance on our information booths. The program is expanding to include two more information centers. Contact Doris Lahr at the FONZ office: 232-4500.

TO THE MEMBERSHIP

First, by way of introduction, my name is Richard Sheridan, and I am the Acting Executive Secretary of FONZ. I came to this job knowing very little about zoos, other than that they are nice places to visit, and that they contain animals. It didn't matter much to me whether the National Zoo had an educational program or not. There didn't seem to be much to be educational about. All of that changed within the first few days I spent in the FONZ office. I saw a small group of intelligent, dedicated people working here, and I realized that there must be something to this operation. I proceeded to try and find out what it was that made people such purists about their volunteer work.

Answering that question was not easy, I found, but rather it was a bit like exploring a cave; the further I looked, the deeper I got involved. Needless to say, it wasn't long before I "got the bug" also and was tearing into all the literature I could lay hands on about the plight of tigers and other animals. I found that the systematic extermination of wild animals was part of the overall issue of ecology, and a very important part of it at that. I found that the only way to reverse the shocking trend of wild animal slaughter is through education, and education is the basic reason for the existence of FONZ. I sat back in my chair feeling smug at the good fortune I had had in getting involved in such a worthy organization.

During my early investigations, I looked into the history of FONZ, what it is doing now, and what perhaps it should be doing. It is clear that we have changed. We are no longer the "roll-up-your-shirtsleeves-and-let's-get-to-work" type of organization. It is in many ways unfortunate that both the size and the responsibilities of the organization have far outstripped that old philosophy. Be that as it may, we are now on the threshhold of a new era for FONZ. With the additional revenue from the sales shop, the trackless train, and other programs, we will soon be capable of providing a great deal more muscle for the Zoo educational program than ever before.

In order to manage the extensions that seem to be just over the horizon, we need two things desperately. The first is an expanded paid professional staff that will man the office from nine to five on weekdays and carry out the programs initiated by the Board. We need this because, in order to be really effective in our work, we must pay it full time attention. By sheer weight of

volume we cannot do otherwise. The second vital need we will shortly have is a more active and participatory membership. There will be many programs here that will require the assistance of volunteers. The high standard of the tour guide program must be maintained, the sales shop and the information booths must be manned, and many, many other things must be done. The only way we will accomplish all this is with more dedicated volunteer manpower than we now have. FONZ has done some fine things in the past. I think we can do some finer things in the future.

– Richard G. Sheridan,
Acting Executive Secretary

PHOTOGRAPHY CREDITS

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"To operate exclusively for educational and charitable purposes, and in particular to educate the general public on matters relating to the increase and improvement of the facilities and the collection of the National Zoological Park, and to foster its use by the general public and the schools for educational purposes" – From *Articles of Incorporation of Friends of the National Zoo, Chartered Under The District of Columbia Non-Profit Corporation Act.*

Memberships:

Life Membership (single payment)	$250.00
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